Moody's Analytics

CECL – Where to Start, How to Succeed

April 2019

Today's Discussion Points

- » CECL Overview: What's Changing?
- » Recent Accounting Updates: Real-life Impact
- » Where to Start: Historical Losses
- » Concluding Remarks and Q&A

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CECL Overview

What is CECL

FASB, ASU No. 2016-13, June 2016
Financial Instruments—Credit Losses (Topic 326)


FINANCIAL ACCOUNTING SERIES

FASB ACCOUNTING STANDARDS UPDATE

No. 2016-13
June 2016

Financial Instruments—Credit Losses
(Topic 326)

Measurement of Credit Losses on Financial Instruments

An Amendment of the FASB Accounting Standards Codification®

Financial Accounting Standards Board

CECL means CURRENT EXPECTED CREDIT LOSS Lifetime loss estimate from origination which replaces "incurred loss" model – where,

> "The measurement of expected credit losses is based on relevant information about ***past events, including historical experience, current conditions, and reasonable and supportable forecasts*** that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods that are appropriate in its circumstances."

Changes under CECL

Applies to all banks, savings associations, credit unions

- » Scope: financial instruments measured at amortized cost basis
  - – Loans held for investment
  - – Debt securities held to maturity
  - – Debt securities available for sale*
  - – Off balance sheet exposures (Loan commitments, Letters of Credit)
- » Measure expected credit losses over the life of financial asset based on:
  - – Past events, including historical experience
  - – Current conditions
  - – Reasonable and supportable forecasts
- » New and changing GAAP Disclosure requirements: amortized cost by credit quality indicators and vintage, collateral dependent loans and PCD disclosure

*Credit losses are recorded through the allowance and can be reversed. Allowance is subject to FV floor. Holding gain/loss – OCI. AFS security's Am Cost is written down to FV only if Am Cost<FV and the institution intends to sell or more than likely will be required to sell.

Summary

Your CECL Formula =

Historical loss experience + **Adjustments for Current Economic Conditions** + **Adjustments for Reasonable & Supportable Forecast***

*326-20-30-9 - An entity is not required to develop forecasts over the contractual term of the financial asset or group of financial assets. Rather, for periods beyond which the entity is able to make or obtain reasonable and supportable forecasts of expected credit losses, an entity shall revert to historical loss information.

Defining What is Acceptable…

There are a few elements that are <u>required</u> to be incorporated when using <u>any</u> methods…

- Historical Information
- Current conditions
- Reasonable & Supportable
- Reversion to long term averages
- Expert Judgement

326-20-30-8 Historical credit loss …. provides a basis for an entity's assessment of expected credit losses. **Historical loss information can be internal or external historical loss information (or a combination of both)**. An entity shall **<u>consider adjustments to historical loss information</u>** for differences in current asset specific risk characteristics, such as differences in underwriting standards, portfolio mix, or asset term within a pool at the reporting date or **when an entity's historical loss information is not reflective of the contractual term** of the financial asset or group of financial assets.

326-20-30-9 An entity shall not rely solely on past events to estimate expected credit losses…. **The adjustments to historical loss information** **<u>may be qualitative in nature</u>** and should reflect changes related to relevant data **…..** . However, an entity is not required to develop forecasts over the contractual term of the financial asset or group of financial assets. Rather, **for periods beyond which the entity is able to make or obtain reasonable and supportable forecasts** of expected credit losses, an entity shall **revert to historical loss information**

Disclosing Credit Quality Indicators of Financing Receivables by Amortized Cost Basis

326-20-55-79 The following Example illustrates the presentation of credit quality disclosures for a financial institution

New and Changed Reporting Requirements

	Term Loans Amortized Cost Basis by Origination Year						Revolving Loans Amortized Cost Basis	
As of December 31, 20X5	20X5	20X4	20X3	20X2	20X1	Prior		Total
Residential mortgage:								
Risk rating:								
1–2 internal grade	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3–4 internal grade	-	-	-	-	-	-	-	-
5 internal grade	-	-	-	-	-	-	-	-
6 internal grade	-	-	-	-	-	-	-	-
7 internal grade	-	-	-	-	-	-	-	-
Total residential mortgage loans	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Residential mortgage loans:								
Current-period gross writeoffs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Current-period recoveries	-	-	-	-	-	-	-	-
Current-period net writeoffs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

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Recent Updates

Regulatory Capital Changes

NR 2018-142
FOR IMMEDIATE RELEASE
December 21, 2018

Agencies Allow Three-Year Regulatory Capital Phase In for New Current Expected Credit Losses (CECL) Accounting Standard

The federal bank regulatory agencies approved a final rule modifying their regulatory capital rules and providing an option to phase in over a period of three years the day-one regulatory capital effects of the update to the accounting standard known as the "Current Expected Credit Losses" (CECL) methodology. The final rule also revises the agencies' other rules to reflect the update to the accounting standards.

Proposed changes to Call Report FFIEC 031

Draft Reporting Form Call Report Revisions Proposed to Take Effect March 31, 2019

This draft reporting form reflects revisions addressing the revised accounting for credit losses under the Financial Accounting Standards Board's Accounting Standards Update No. 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" to the FFIEC 031 Call Report, proposed to take effect March 31, 2019, as described in the federal banking agencies' initial Paperwork Reduction Act Federal Register notice published on September 28, 2018.

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Where to Start: Historical Losses

Historical loss rates and estimates of PDs/LGDs can be a great place to start

- » Loss Rate
  - – Pool/cohort approach
  - – Rating and loan type

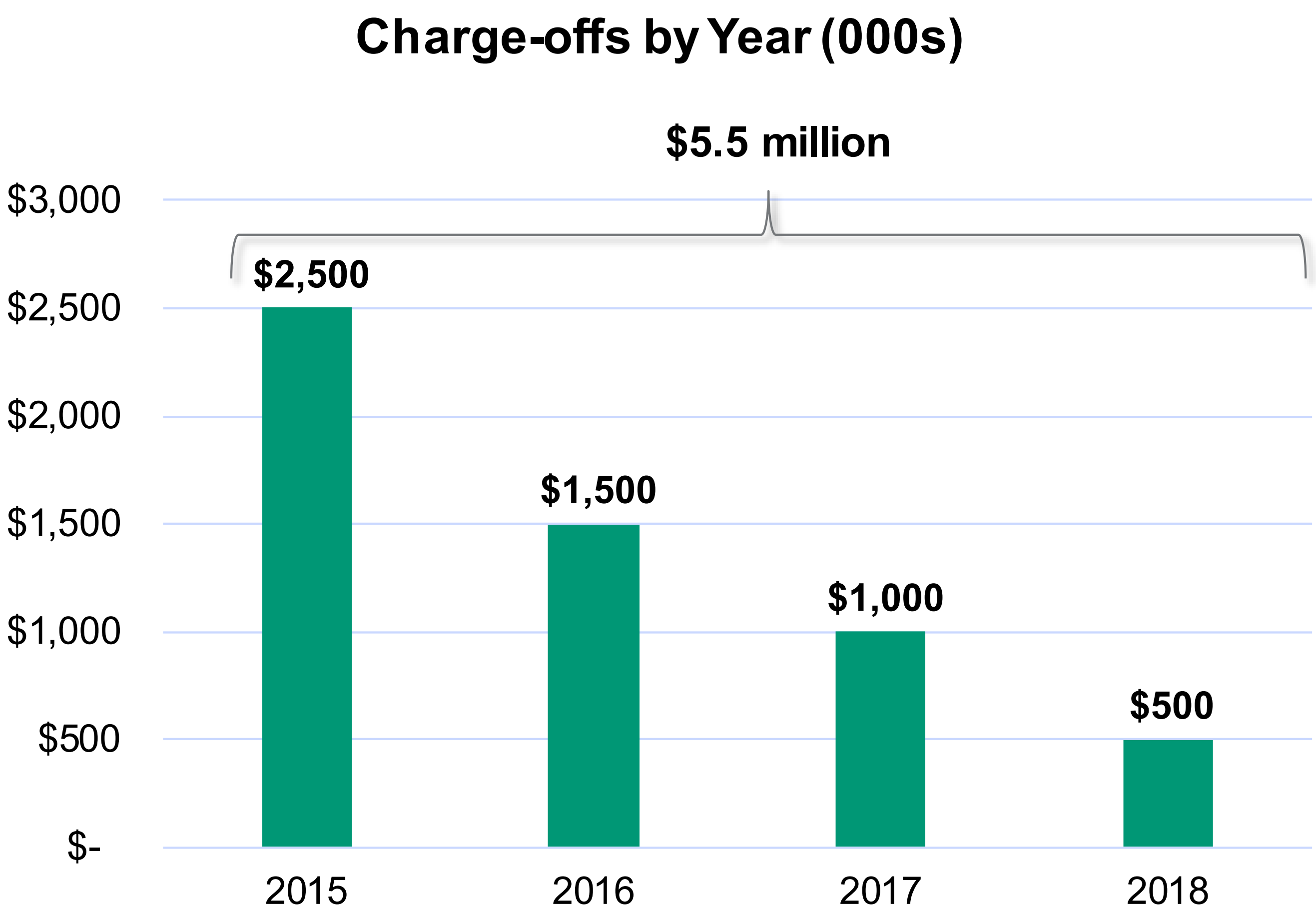
- » Probability of Default (“PD”) and Loss Given Default (“LGD”)
  - – Mapping internal ratings to agency ratings
  - – Use internal rating distribution and a central tendency of default
    - › Improve granularity with a PD (LGD) model
  - – Build or buy PD/LGD scorecards as part of a “dual risk ratings” framework

Loss Rates: Internal loss experience (pooled)

Example:

» Middle Market Loan Portfolio
» Current Balance: $500 million
» Average Life (adj): 4 years
» Start with YE 2014 as analysis pool
» 2014 Pool Balance: $450 million
» Total charge-offs 2015-2018: $5.5 million

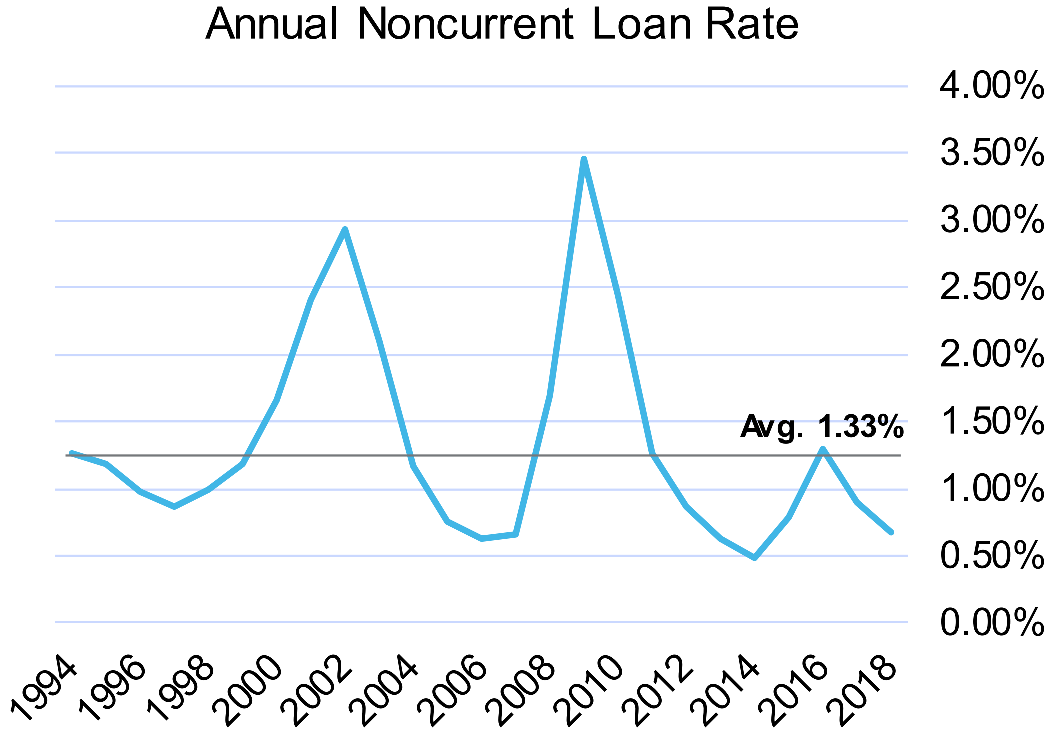
» **Charge-off Rate: <u>1.22%</u> (5.5 / 450)**
» **Unadjusted ACL: <u>$6.1 million</u> (500 x 1.22%)**



Industry experience can help offset data limitations

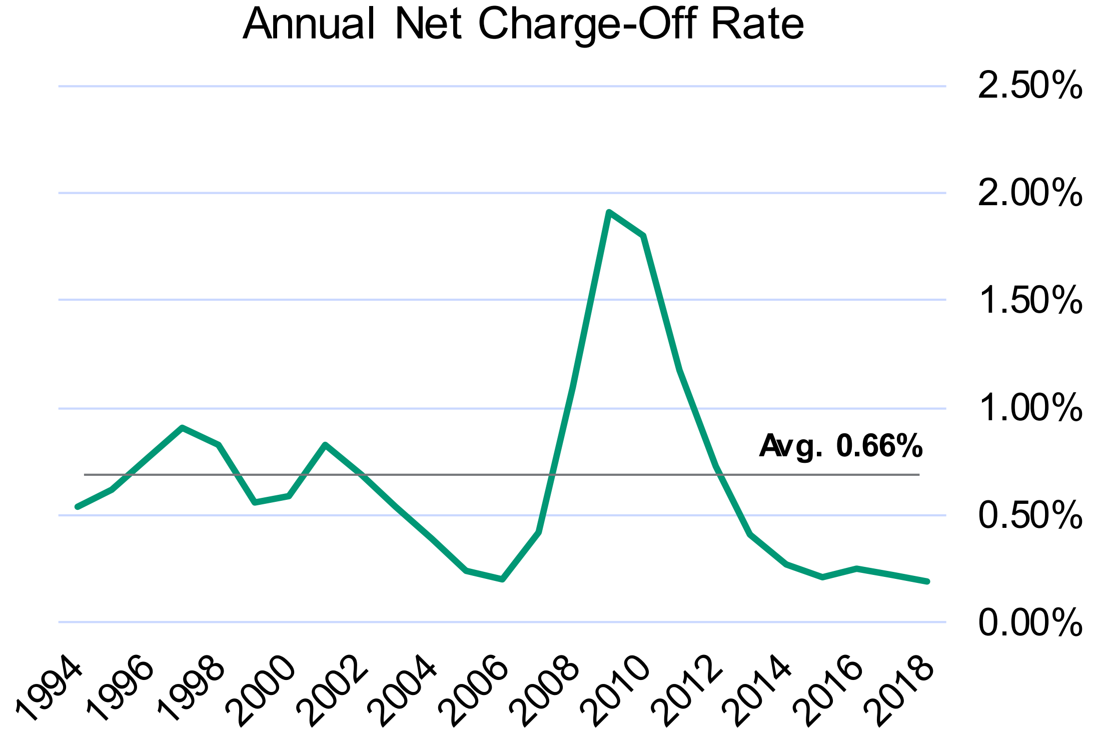
Noncurrent loans can serve as a proxy for default in the absence of data

All Institutions



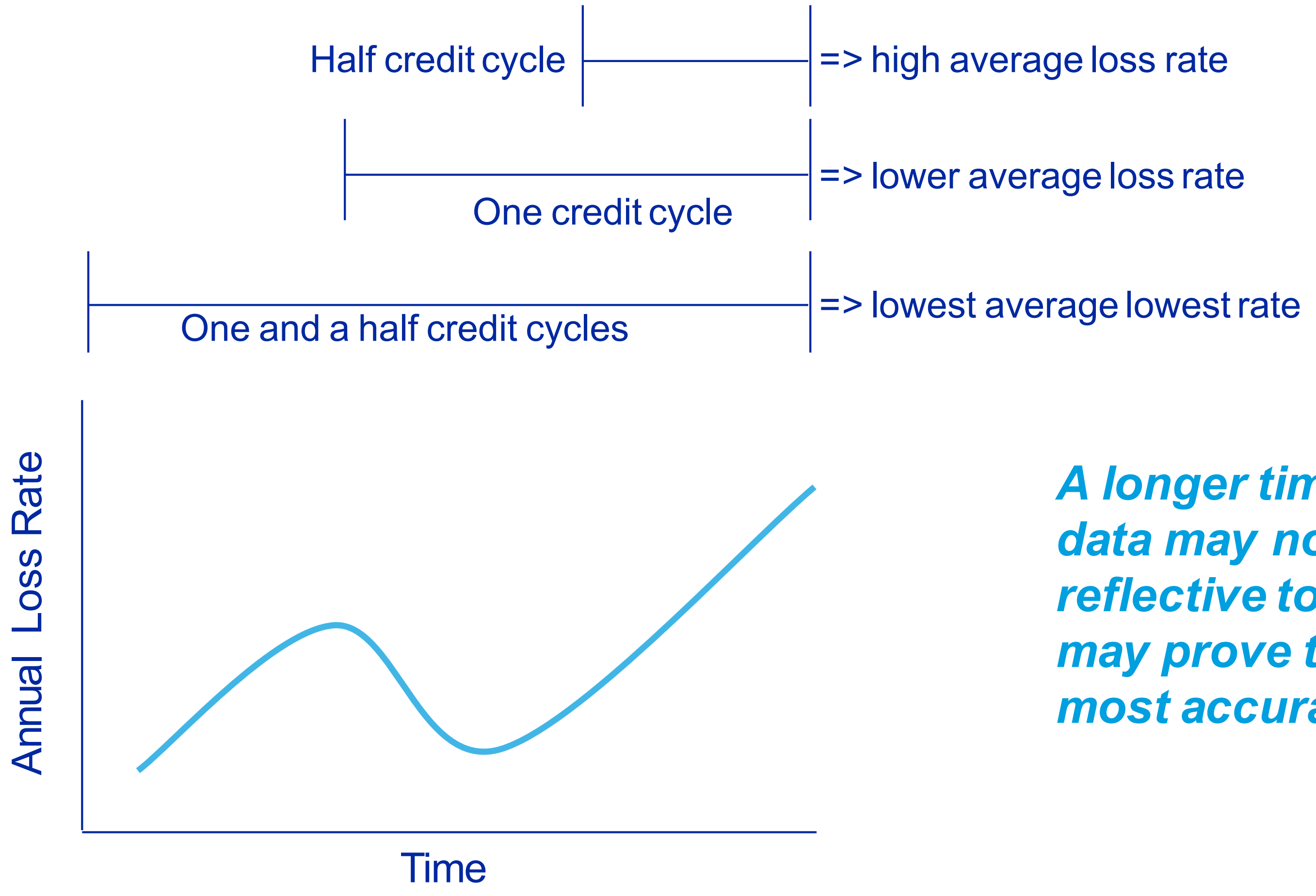
A more relevant benchmark and a slightly different risk metric

Banks and SIs $1B-$10B



Source: FDIC

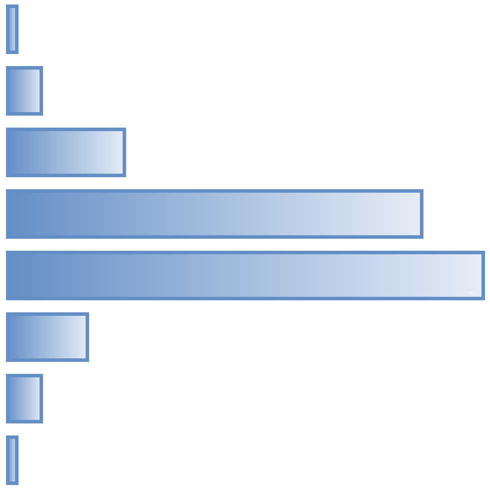
The length of the dataset used can have a material impact on the historical loss rate(s) used



A longer time series of data may not be as reflective today, but it may prove to be the most accurate over time

Assigning loss rate factors to internal ratings can differentiate loans by risk profile and type

Rating	CRE - Construction	CRE - Stabilized	C&I - Working Capital	Rating Distribution
1	0.33%	0.05%	0.10%	
2	0.69%	0.15%	0.20%	
3	1.05%	0.35%	0.50%	
4	2.45%	0.75%	1.00%	
5	4.50%	1.25%	1.85%	
6	7.25%	2.25%	2.75%	
7	22.50%	10.00%	15.00%	
8	50.00%	50.00%	50.00%	
9	100.00%	100.00%	100.00%	



Measuring credit risk using a PD and LGD approach has become industry standard

On average, the amount we could potentially lose depends on four things …		… how likely the borrower is to go into default		… the estimate of loss (1-recovery) should default occur		… the amount of the credit exposure
ECL	= ∑	**PD**	x	**LGD**	x	**Exposure**
Expected Credit Loss ($)		*Probability of Default (%)*		*Loss Given Default (%)*		*Exposure Amount ($)*
$9 thousand	=	**3%**	x	**30%**	x	**$1 million**

$$\underbrace{3\% \quad \text{x} \quad 30\%}_{\text{0.90\% Expected Loss (\%)}}$$

Internal ratings or scores can be mapped to quantitative risk measures, like PDs

Score	Scale	PD
87.35 - 100	Aaa	0.03%
75.20 - 87.34	Aa	0.05%
60.15 - 75.19	A	0.08%
50.05 - 60.14	Baa	0.20%
41.07 - 50.04	Ba	0.75%
25.78 - 41.06	B	3.50%
13.55 - 25.77	Caa	7.90%
0 - 13.54	C	30.50%

Average annual credit loss rates by letter rating (1983-2018)

Aaa	Aa	A	Baa	Ba	B	Caa_C
0.00%	0.02%	0.02%	0.12%	0.56%	2.35%	7.88%

By assigning a PD (or loss rate) to each borrower (or loan), you can further differentiate the level of credit risk within the portfolio

Sector-level data can be used to improve the accuracy of the PD's (align with an average)

NAICS Sector	NAICS (2-digit)	Annual Default Rate (Illustrative)
Agriculture, Forestry, Fishing and Hunting	11	1.61%
Mining	21	2.82%
Utilities	22	0.90%
Construction	23	3.21%
Manufacturing	31 - 33	2.16%
Wholesale Trade	42	2.11%
Retail Trade	44 - 45	2.56%
Transportation and Warehousing	48 - 49	3.39%
Information	51	2.94%
Finance and Insurance	52	2.02%
Real Estate Rental and Leasing	53	2.38%
Professional, Scientific, and Technical Services	54	2.44%
Management of Companies and Enterprises	55	1.36%
Administrative and Support and Waste Management and Remediation Services	56	2.42%
Educational Services	61	1.39%
Health Care and Social Assistance	62	1.32%
Arts, Entertainment, and Recreation	71	2.00%
Hospitality	72	2.66%
Other Services (except Public Administration)	81	1.86%
Public Administration	92	0.61%

» Calculate the amount of the portfolio in each sector (%)

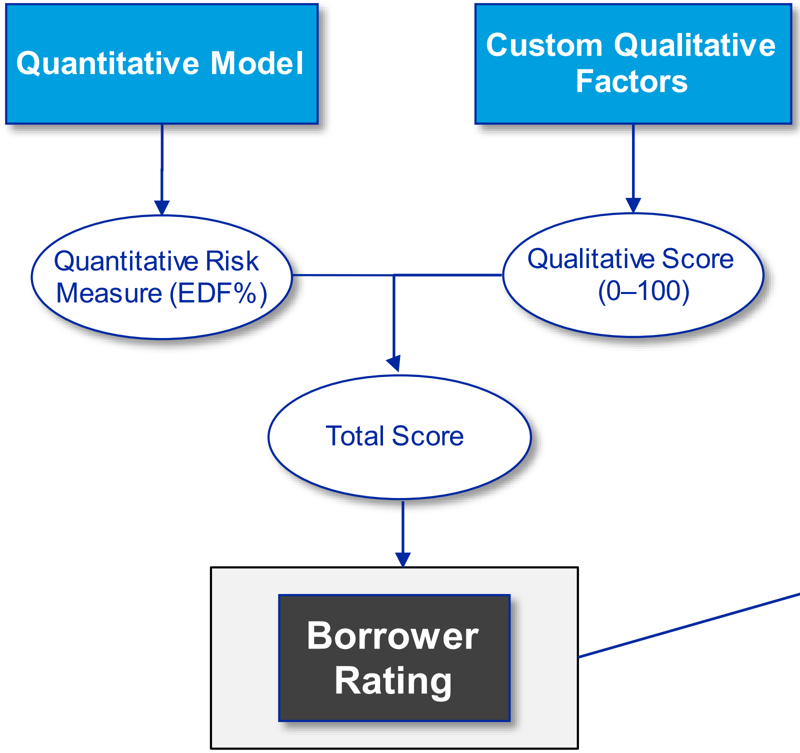
» Multiply the sector exposure to the sector default rat

» Determine portfolio weighted-average default (or loss) rate for a more "granular" measure of risk for the portfolio

» Can be used as derive a long-run average default (or loss) rate, or a central tendency estimate

Dual Risk Rating Scorecard Example

Commercial Real Estate Loan

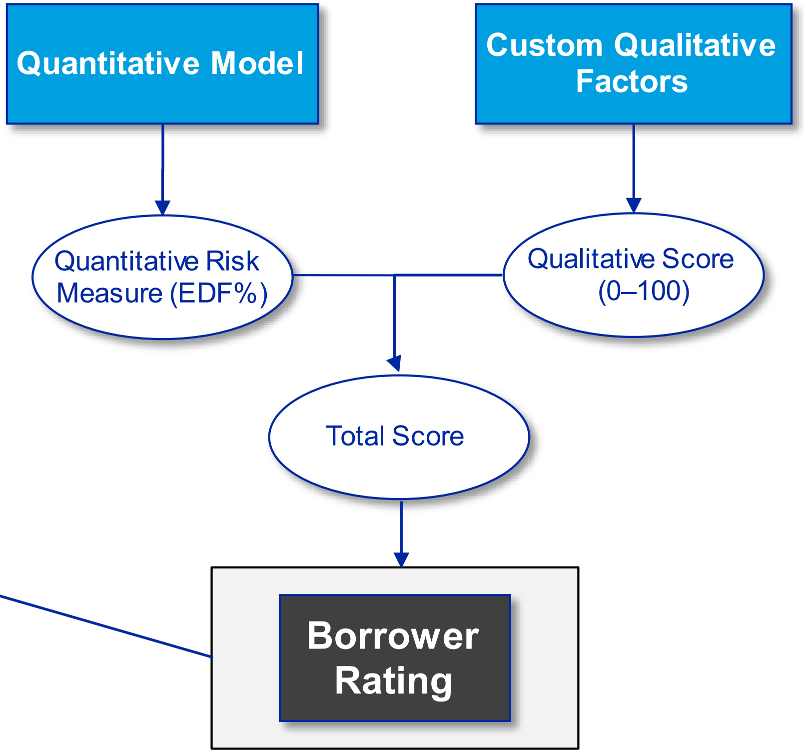


Master Rating Scale

Rating Grade	PD (1 Year)	Rating Grade
1	0.08%	1
2	0.14%	2
3	0.25%	3
4	0.43%	4
5	0.75%	5
6	1.31%	6
7	2.30%	7
8	4.02%	8
9	7.04%	9
10	12.31%	10
…	…	…

Consistent grades across the entire loan portfolio

Commercial & Industrial Loan



Example of a PD and LGD Rating Scale

		A	B	C	D	E	F	G
		5%	15%	20%	25%	35%	45%	55%
1 Pass	**0.08%**	0.00%	0.01%	0.02%	0.02%	0.03%	0.04%	0.04%
2 Pass	**0.14%**	0.01%	0.02%	0.03%	0.04%	0.05%	0.06%	0.08%
3 Pass	**0.25%**	0.01%	0.04%	0.05%	0.06%	0.09%	0.11%	0.13%
4 Pass	**0.43%**	0.02%	0.06%	0.09%	0.11%	0.15%	0.19%	0.24%
5 Pass	**0.75%**	0.04%	0.11%	0.15%	0.19%	0.26%	0.34%	0.41%
6 Pass	**1.31%**	0.07%	0.20%	0.26%	0.33%	0.46%	0.59%	0.72%
7 Pass	**2.30%**	0.11%	0.34%	0.46%	0.57%	0.80%	1.03%	1.26%
8 Pass	**4.02%**	0.20%	0.60%	0.80%	1.01%	1.41%	1.81%	2.21%
9 Pass	**7.04%**	0.35%	1.06%	1.41%	1.76%	2.46%	3.17%	3.87%
10 OAEM	**12.31%**	0.62%	1.85%	2.46%	3.08%	4.31%	5.54%	6.77%
11 Substandard - A	**20.00%**	1.00%	3.00%	4.00%	5.00%	7.00%	9.00%	11.00%
12 Substandard - NA	**35.00%**	1.75%	5.25%	7.00%	8.75%	12.25%	15.75%	19.25%
13 Doubtful	**50.00%**	2.50%	7.50%	10.00%	12.50%	17.50%	22.50%	27.50%
14 Loss	**100.00%**	5.00%	15.00%	20.00%	25.00%	35.00%	45.00%	55.00%

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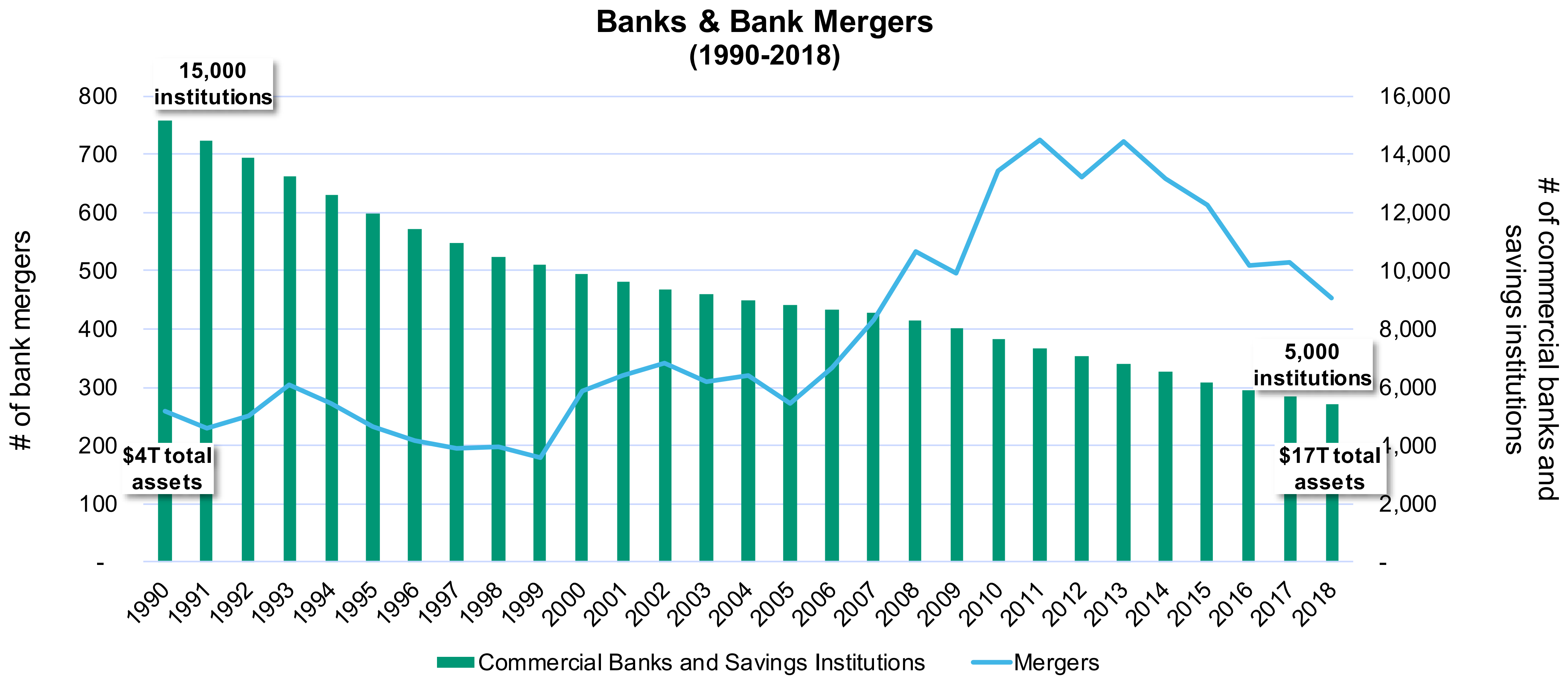
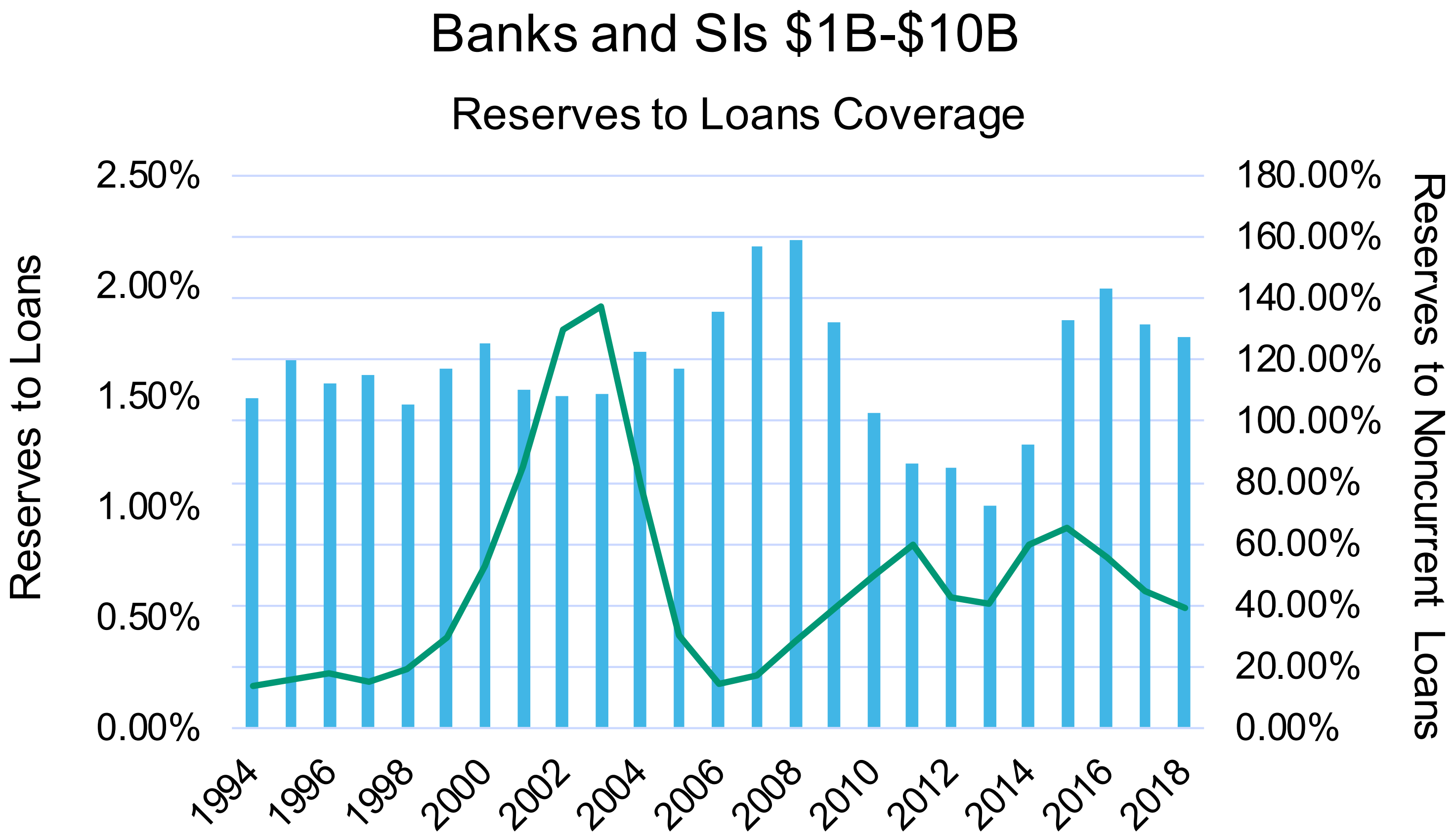
Concluding Remarks and Q&A

Banking Industry Growth & Consolidation



Source: FDIC as of December 31, 2018

The starting point will influence the level of your reserves, and more…explore your options



Segment-at-a-glance:

- The number of institutions is at an all-time high (638); among the fastest growing segment in banking
- Assets per employee at an all-time high ($6.5 million; avg. $4.6 million)
- Average loans outstanding is at an all-time high ($1.19 billion)
- Highest % of loans to total assets (71%)
- Among the highest in profitability in recent years (pre-tax ROA 1.7%); Efficiency Ratio declined each year since 2013 (below 60% for the first time since 2007)


ANY
QUESTIONS
?

MOODY'S ANALYTICS

COUNTDOWN TO CECL

Credit Unions | Community Banks | Regional Banks

May 1-3, 2019 | Orlando, Florida

cecl-conference-2019.moodys.io

Speakers include::

Alison Clark
Chief Accountant – Office of Examination & Insurance
NCUA

Anne Martinez
EVP and Senior Loan Review Officer
SOUTHSIDE BANK

Jonathan Prejean
MD – Accounting and Reporting Transformation
DELOITTE

Leslie Seidman
Former Chair
FASB

Mark Zandi
Chief Economist
MOODY'S ANALYTICS

Globally and locally acknowledged for award-winning tools to measure and manage risk.

CECL Technology Category Leader

Balance Sheet Management Technology Category Leader

Compliance Risk Technology Implementation of the Year and Credit Risk Technology Implementation of the Year

CLO Data Provider of the Year

Innovation in Customer Service - Financial Services Industries

Best ESG Solution

Best Solvency II Solution

Best Solvency II Tech Solutions Category Winner

Technology Vendor of the Year

Stress Testing Product of the Year Category Winner

Economic Scenario Generation Product of the Year Category Winner

Solvency II Product of the Year Category Winner

Regulatory Reporting Product of the Year Category Winner

Best Buy-Side Market Surveillance Tool Category Winner – Structured Finance Portal

Ranked 5 out of 100

Credit Risk Category Winner

Enterprise Stress Testing Solution Category Winner

#1 IFRS 9

#1 Asset and Liability Management

#1 Regulatory Capital Calculation and Management

Ranked 19th in the Overall Top 100 Rankings

Best Credit Risk Solution Provider – RiskCalc™

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